



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,604	04/26/2001	Haixiang He	2494/105	8615

34645 7590 09/22/2005

JOHN C. GORECKI, ESQ.

P.O BOX 553

CARLISLE, MA 01741

EXAMINER

NGUYEN, HAI V

ART UNIT

PAPER NUMBER

2142

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/842,604

Applicant(s)

HE, HAIXIANG

Examiner

Hai V. Nguyen

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the communication received on 01 July 2005.
2. Claims 1-28 are presented for examination.

Response to Arguments

3. Applicant's arguments and amendments received on 01 July 2005 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-28 are rejected under 35 U.S.C. 102(e) as being anticipated by **Ahearn et al.** U.S. patent # **5,926,463**.
6. As to claim 1, Ahearn teaches substantially the invention as claimed, including a method of producing a multicast tree from existing multicast information (*current baseline*) in a network, the network including a plurality of network devices (*Figs. 1, 8, workstations, servers, switches, routers*) including at least a plurality of routers (*Figs. 1, 8, multicast routers 9*) that are members of the multicast, a set of the routers each

Art Unit: 2142

including a multicast database that is protocol independent (*Figs. 3, 8, items 9A, 9, Abstract, col. 6, line 55 – col. 7, line 17; MIB II, col. 17, lines 34-57*), the method comprising:

locating the multicast database within each of the set of the routers (*Figs. 3, 8; Abstract, col. 3, lines 3-30, col. 4, lines 35-49; the network supervisor can request identification of each of the individual servers, routers, and switches between the particular workstation 1a and the particular server 13a, col. 5, line 39 – col. 6, line 54; col. 6, line 55 – col. 7, line 17*);

retrieving the existing multicast information from each located multicast database (*Figs. 3, 8; Abstract, col. 3, lines 3-30, col. 4, lines 35-49; the network supervisor is then able to obtain information from the devices and analyze any difficulties in communication between the particular workstation 1a and the particular server 13a, col. 5, line 39 – col. 6, line 54; col. 6, line 55 – col. 7, line 17; the router watch means periodically polls each router for key configuration data, col. 8, lines 15-24*);

tracing the retrieved existing multicast information across the plurality of routers to form the multicast tree (*Fig. 3, the MTRACE tool creates a path, tracing the flow of Multicast IP traffic, from a known source, to a given end station, col. 13, lines 20-25; Mtrace utilizes a tracing feature implemented in multicast routers (mrouted version 3.3 and later) that is accessed via an extension to the IGMP protocol. A trace query is passed hop-by-hop along the reverse path from the receiver to the source, collecting hop addresses, packet counts, and routing error conditions along the path and then the response is returned to the requestor, col. 13, line 55 – col. 14, line 64; col. 17, lines 34-*

57; the result is that paths and trees become managed entities. The paths/trees are set as permanent or transient. Permanent paths/trees can be polled at a user described frequency. Diagnostic information will be collected from the entity and stored to the status watch database, col. 13, lines 47-59).

7. As to claim 2, Ahearn discloses, wherein the multicast includes a root node, the retrieved multicast information being traced from the root node, the root node being one of the plurality of network devices (*Fig. 3, root router 9A*).

8. As to claim 3, Ahearn discloses, wherein the network implements the Internet Protocol (*Figs. 1, 8, the net implemented by IP multicasting*).

9. As to claim 4, Ahearn discloses, wherein the set of routers includes an unicast database (*the status database*) having network information (*diagnostic information*), the unicast database being protocol independent, the method further including: locating the unicast database within each of the set of network devices (*Abstract; col. 3, line 3 – col. 4, line 49*); retrieving network data from each unicast database (*Abstract; col. 3, line 3 – col. 4, line 49*); and using the retrieved network data to form the multicast tree (*Abstract; col. 3, line 3 – col. 4, line 49*).

10. As to claim 5, Ahearn discloses, wherein each multicast database is a management information base (*MIB II*).

11. As to claim 6, Ahearn discloses, wherein at least one of the plurality of network devices includes a protocol dependent multicast database, the multicast tree being formed free from any data retrieved from the protocol dependent multicast database

Art Unit: 2142

(Haggerty, col. 8, lines 37-56; col. 14, lines 55-65; col. 17, line 66 – col. 18, line 2; col. 19, lines 21-32; Cheng, pages 6-9, sections 4.1, 4.2, 4, 3, 5).

12. As to claim 7, Ahearn discloses, wherein the retrieved multicast information is traced by an application incorporating the Simple Network Management Protocol (*col. 15, lines 22-63; col. 21, lines 21-32*).

13. As to claim 8, Ahearn discloses, wherein the set of routers includes no more than one of the plurality of network devices (*Figs. 3, 8*).

14. As to claim 9, Ahearn discloses, wherein the set of routers includes a first router (*Fig. 3, router 9A*) and a second router (*Fig. 3, router 9*), each multicast database including a set of multicast data, the set of multicast information being different in the multicast database in the first router than the set of multicast information in the multicast database in the second router (*col. 14, lines 38-47*).

15. Claim 10 is corresponding apparatus claim of claim 1; therefore, it is rejected under the same rationale as in claim 1.

16. Claims 11-17 are similar limitations of claims 2-8; therefore, they are rejected under the same rationale as in claims 2-8.

17. Claim 18 is corresponding computer readable medium claim of claim 1; therefore, it is rejected under the same rationale as in claim 1.

18. Claims 19-25 are similar limitations of claims 2-8; therefore, they are rejected under the same rationale as in claims 2-8.

19. Claim 26 is corresponding apparatus in means plus function claim of claim 1; therefore, it is rejected under the same rationale as in claim 1.

Art Unit: 2142

20. Claims 27-28 are similar limitations of claims 4-5; therefore, they are rejected under the same rationale as in claims 4-5.

21. Further references of interest are cited on Form PTO-892, which is an attachment to this action


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai V. Nguyen whose telephone number is 571-272-3901. The examiner can normally be reached on 6:00-3:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hai V. Nguyen
Examiner
Art Unit 2142



KAMINI SHAH
PRIMARY EXAMINER